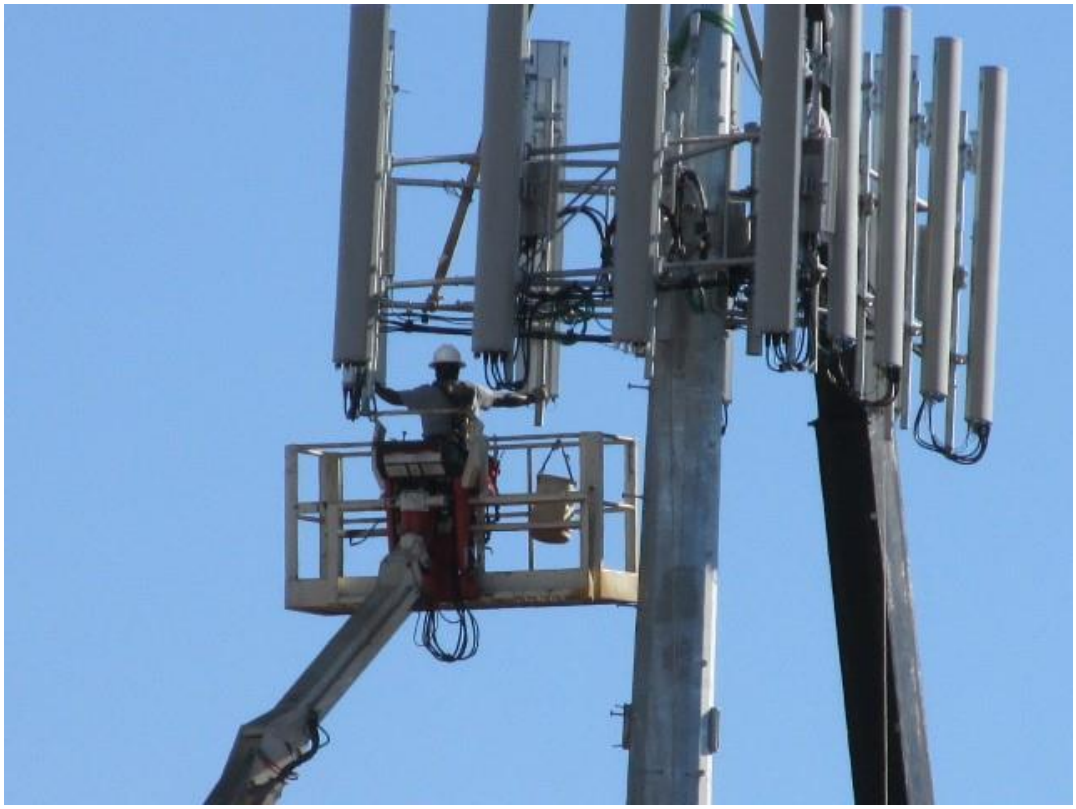
Survey of people with electrical sensitivities in Sweden



1,732 electrically sensitive people in Sweden responded to a survey about their life situation and what causes their symptoms.

Keywords: electrical sensitivity, EHS, survey, demographics, cause of symptoms, employment, light sensitivity, migration, housing, work

The survey setup

In 2005 a detailed survey was sent by postal mail to all 2,294 members of the Swedish EHS support group, which is known in English as FEB. 1,732 members replied, i.e. a response rate of 75%.

The report was put together by Gudrun Holmberg (sociologist), Rickard Garvare (lecturer at Luleå Technical University) and Anette Risveden (electrical engineer). The report was published by FEB in 2007.

Demographics

The largest age group was those aged 56-to-65. The two next largest groups were ages 46-to-55 and 66-to-75. The youngest members were in their twenties.

73% of the respondents were women. This matches the overall membership of FEB, there 76% were women. Women dominated all the age groups.

34% of the respondents had a college or university degree.

Symptoms

All respondents listed more than one symptom. The most common were:

- Fatigue
- Concentration problems
- Hot/burning sensation
- Dizziness
- Skin problems
- Sleep problems
- Heart problems
- Memory problems
- Headaches

When did they get sick?

The questions around how and when people got sick were difficult to answer for many. Several people indicated that in the comments section and 8% did not provide a reply.

The bulk of the replies indicated they got sick in the decade 1988-1997, which coincides with the mass rollout of electronics in the workplace and at home. This could also be because of the age of the bulk of the FEB membership, but the report didn't provide data to show the age distribution when people got sick.

Nearly a hundred people replied they got sick in the decade 1970-1980. A few even as early as the 1940s.

When asked about how long it took them to realize that they were electrically sensitive, they responded:

One month to one year	31%
One to five years	24%

More than five years	17%
Other / don't know	28%

Cause of illness

The cause of illness is hard to know, but many ventured their guesses. Several indicated more than one cause.

Computer / terminal	68%
Dental mercury	48%
Fluorescent / low energy lights	46%
Office equipment	20%
Mobile phone	18%
Cordless phone	15%
Power lines	14%
Domestic appliances	13%
Landline phone	12%
Mobile phone base station / tower	10%
Chemicals	10%

76% believed that their job was partly or fully the reason they became electrically sensitive.

These responses must be interpreted with great caution. Just because the first device that causes symptoms is a computer does not mean the computer is the cause of the illness.

What causes symptoms

When asked what causes symptoms, most people gave more than one response. There were also a lot of "don't know" responses to some of the options.

The most common problems are listed below.

Fluorescent / low energy lights	88%
Computers / terminals	83%
Mobile phones	77%
Television	72%

Cordless phones	72%
Household appliances	63%
Cars (as driver or passenger)	62%
High tension powerline	60%
Consumer electronics	59%
Office equipment	56%
Mobile phone base stations	55%
Landline telephones	53%
Travel by electric train	51%
Electric heater	48%
Travel by bus	45%

A lot of the respondents replied "don't know" to many potential problems, such as radars, district heating systems, hearing aids, light dimmers and coils embedded in floors to assist hearing aids ("loops"). For travel by airplane, about 42% said "yes" and 34% said "don't know," presumably because they hadn't tried.

Sunlight

45% responded that sunlight gave them symptoms. Sweden has little sunlight, both because of its cloudy weather and because of the high latitude. But, Swedes are fair skinned, which could make sunlight a special problem for them. There is no such survey of electrically sensitive people living at lower latitudes, though anecdotally this writer knows several people with light sensitivity outside Scandinavia.

Effect on employment

79% of the respondents were employed when they got sick, either full-time or part time. At the time of the survey only 30% had a job of some sort.

33% were able to get some sort of accommodation at work, but of these people only 55% were still working in the same job.

Family history

20% of the respondents state that there is at least one other person in their family who is electrically sensitive.

Forced migrations

33% state that they have been forced to move residence at least once due to their electrical sensitivity. 9% say they do need to move, but cannot afford it. 26% say they need to move but don't know of a better place to live.

The most common reasons for moving were nearby mobile phone base stations, the neighbor's wireless phones and that it is not feasible to modify the existing home to make it low-EMF. (Wireless networks were uncommon in 2005.)

45% say they *need* to live in a low-radiation area, while an additional 32% would *like* to live in such an area, 19% are willing to move to a low-radiation area regardless of where it is in Sweden.

Modification of the home

38% state that they have made at least partial modifications to their home to reduce the radiation (this appears to refer to modifications of the electrical system). 25% have applied for money from the social services to pay for the modifications, but only 35% of the applicants received any financial help at all.

5% of the respondents live partially or fully without electricity (3% partially, 2% fully).

Discussion

This appears to be the largest such study ever done. The survey did not ask whether people were self-diagnosed or diagnosed by a physician, and all the respondents were members of the Swedish EHS patient organization. This may mean the survey is not fully representative of the Swedish EHS population, which was believed to number about 200,000 adults at the time, according to the report.

Due to the high average age of the respondents, the data from this survey looks like the prevalence of EHS is going down, when in actuality it appears to go up (Hallberg, 2006).

The technology has changed since these people were surveyed. In 2005 wireless networks, flat screens, LED lamps and smart phones were uncommon, or didn't even exist. Household appliances and cars were not loaded with electronics. Cell towers served larger areas and thus were not close to most people. The overall radio-frequency radiation in cities was lower than it is today.

It would be interesting to see what causes people's symptoms today. In the survey 83% are affected by computers and 72% by televisions (televisions are further from the

viewer, so a lower rate is expected). Screens were mostly CRT types in 2005 — did the modern flat screens' lower radiation levels help?

Do more people report problems with today's cars, since they radiate more? Is access to buses and trains more difficult, with the new smart phones?

More information

Other articles about EHS are available at www.eiwellspring.org/health.html.

References

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